BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2019-185-E
DOCKET NO. 2019-186-E

In the Matter of: South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Carolinas, LLC's and Duke Energy Progress LLC's Standard Offer Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) – S.C. Code Ann. Section 58-41-20(A)	)	**JOINT APPLICATION OF DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC FOR APPROVAL OF STANDARD OFFER AVOIDED COST METHODOLOGIES, FORM CONTRACT POWER PURCHASE AGREEMENTS, COMMITMENT TO SELL FORMS, AND OTHER RELATED TERMS AND CONDITIONS.**

Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and, together with DEC, the "Companies" or "Duke"), by and through counsel, hereby make this Application to the Public Service Commission of South Carolina ("Commission") pursuant to S.C. Code Ann. § 58-41-20(A) and Commission Order No. 2019-524,[1] to accomplish and further the purposes and goals of the South Carolina Energy Freedom Act ("Act 62" or the "Act") and for approval of the following:

[1] On July 17, 2019, the Commission issued Order No. 2019-524, adopting the procedural scheduled in these dockets proposed by the Companies in their June 20, 2019 filing (as further supported in the Companies' July 5, 2019 filing identified in the Order). The Companies' June 20, 2019 filing proposing a procedural schedule stated that DEC and DEP "intend to submit a single application and identical testimony in these proceedings, just as they did in the pending avoided cost case in Docket No. 1995-1192-E" and "request[ed] to consolidate Docket Nos. 2019-185-E and 2019-186-E for administrative purposes." In light of the fact that Order No. 2019-524 adopts the Companies' proposed procedural schedule and has set both dockets for a consolidated evidentiary hearing, the Companies are proceeding to file as single joint Application and supporting testimony.

- The Companies' application of the peaker methodology to calculate DEC's and DEP's avoided cost rates;
- DEC's and DEP's updated Standard Offer, as now defined by S.C. Code Ann. § 58-41-10(15), which includes the Companies' respective Schedule PP (SC) Purchased Power tariffs ("Standard Offer Tariff" or "Schedule PP"), Terms and Conditions for the Purchase of Electric Power ("Standard Offer Terms and Conditions" or "Terms and Conditions"), and Standard Offer power purchase agreement ("Standard Offer PPA") available to all qualifying cogenerators and small power production facilities ("QFs") up to 2 megawatts ("MW") in size;
- DEC's and DEP's form of power purchase agreement available to small power producer QFs that are not eligible for the Standard Offer ("Large QF PPA"); and
- DEC's and DEP's notice of commitment to sell form ("Notice of Commitment Form").

Through this Application, DEC and DEP are seeking Commission approval of each of the above-listed documents as specifically required by Act 62. Act 62 also expressly requires that the decisions made by the Commission in this proceeding comply with Section 210 of the Public Utility Regulatory Policies Act of 1978 ("PURPA") and the Federal Energy Regulatory Commission's ("FERC") regulations implementing those provisions.[2] Additionally, Act 62 requires the Commission's decisions in this proceeding to "strive to reduce the risk placed on the using and consuming public."[3] The Companies' implementation of PURPA and compliance with the requirements of Act 62, as supported in the testimony and associated exhibits filed

[2] S.C. Code Ann. § 58-41-20(A).
[3] *Id*.

contemporaneously with this Application, achieves these mandates from the South Carolina General Assembly, with significant consideration being given to the impact to customers.

As directed by Commission Order No. 2019-524, in support of this Application, the Companies are pre-filing direct testimony of the following witnesses:

- **George Brown**, General Manager of Strategy, Policy, and Strategic Investment in the Duke Energy Distributed Energy Technology group, who provides an overview of the PURPA mandatory purchase obligation, Act 62 and the Companies' efforts through the instant Application to reduce the risk on the using and consuming public.
- **Glen A. Snider**, Director of Carolinas Resource Planning and Analytics, supports the Companies' continued application of the peaker methodology to quantify DEC's and DEP's avoided capacity and energy costs as well as the calculation of DEC's and DEP's avoided cost rates to be paid to QFs pursuant to PURPA.
- **Steven B. Wheeler**, Director of Pricing and Regulatory Solutions, supports the Companies' standard offer Schedule PP tariff, standard offer power PPA, and standard offer Terms and Conditions, including the administration of the Integration Services Charge.
- **David B. Johnson**, Director of Business Development and Compliance, supports the Companies' form of negotiated PPA that applies to QFs that do not qualify for the standard offer PPA, along with the Notice of Commitment Form available to Standard Offer QFs as well as larger negotiated PPA QFs
- **Nick Wintermantel**, Consultant and Partner at Astrapé Consulting, supports the Astrapé Solar Ancillary Services Study developed on behalf of the Companies, to

quantify DEC's and DEP's ancillary services cost of integrating QF solar, which is used to calculate the Integration Services Charge.

In support of this Application, DEC and DEP respectfully show the Commission the following:

1. The Companies' general offices are at 550 South Tryon Street, Charlotte, North Carolina, and their mailing address is:

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410 South Wilmington Street
Raleigh, North Carolina 27601-1849

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2. Legal counsel for the Companies in this proceeding are as follows:

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[4] Mr. Breitschwerdt is not admitted to practice in South Carolina and is seeking authorization to appear *pro hac vice* before the Commission in this proceeding.

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3. Copies of all pleadings, testimony, orders, and correspondence in this proceeding should be served upon the attorneys listed above.

I. INTRODUCTION AND BACKGROUND ON ACT 62 AND SOUTH CAROLINA'S IMPLEMENTATION OF PURPA

A. PURPA's Mandatory Purchase Obligation and the Standard Offer Requirements

4. Pursuant to Sections 201 and 210 of PURPA, electric utilities such as DEC and DEP are required to offer to purchase electric energy from qualifying cogeneration and small power production facilities "QFs."[5] This is known as the "mandatory purchase obligation" under PURPA. Pursuant to S.C. Code Ann. § 58-27-865, the customers of electric utilities are responsible for paying for all power purchased from QFs.

5. PURPA requires that the rates electric utilities pay to purchase QF energy shall not exceed the electric utilities' "avoided costs," which PURPA defines as the incremental cost to the electric utility of the electric energy, which, but for the purchase from such QFs, such utility would generate or purchase from another source.[6] PURPA also requires that the rates for purchases of QF power be set at levels and in a manner that is just and reasonable to the utility's customers, in the public interest, and nondiscriminatory towards QFs.[7]

6. In enacting PURPA, Congress directed FERC to prescribe regulations to encourage the development of QFs under PURPA, and delegated to state commissions the responsibility of

[5] *See* 16 U.S.C. § 824a-3(a).

[6] 16 U.S.C. § 824a-3(b), (d).

[7] 16 U.S.C. § 824a-3(b)(l); (2).

implementing FERC's regulations, including PURPA's mandatory purchase obligation.[8] In 1980, FERC issued its rulemaking order, Order No. 69, establishing regulations to implement PURPA.[9] Amongst FERC's regulations to implement PURPA, FERC prescribed additional details regarding electric utilities' obligation to purchase energy and capacity made available by QFs, including expressly prescribing that electric utilities shall not be required to pay more than the avoided costs for purchases from QFs.[10]

7. FERC also recognized in Order No. 69 that smaller QFs could be challenged by the transactional costs of bilaterally negotiating individualized rates with electric utilities, and required states implementing PURPA to make standard rates and terms available to QFs that are 100 kilowatts ("kW") and smaller.[11] FERC's regulations also provide that states "may" put into effect standard rates for purchases for QFs larger than 100 kW, explaining "that the establishment of standard rates for purchases can significantly encourage cogeneration and small power production, provided that these standard rates *accurately reflect the costs* that the utility can avoid as a result of such purchases."[12] Thus, in setting the mandatory purchase obligation requirements under its regulations, FERC mandated that standardized avoided cost rates should be made available to small QF generators of 100 kW or less (which became known as the "standard offer"), while leaving it to the implementing states and state commissions to determine whether to set standardized avoided cost rates for QF generators sized greater than 100 kW. As discussed further

[8] *See* 16 U.S.C. § 824a-3(f); *see also FERC v. Mississippi*, 456 U.S. 742,750-51, 102 S.Ct. 2126 (1982).

[9] *Final Rule Regarding the Implementation of Section 210 of the Public Utility Regulatory Policies Act of 1978*, Order No. 69, FERC Stats. & Regs. ¶30,128, (1980) ("Order No. 69") (establishing regulations to implement PURPA).

[10] *See* 18 C.F.R. 292.303(a); 18 C.F.R. 292.304(a)(2).

[11] *See* Order No. 69, at 12,223; 18 C.F.R. § 292.304(c).

[12] 18 C.F.R. 292.304(C)(2); *Order No. 69*, at 12,223 (emphasis in the original).

below, Act 62 extends the 100 kW minimum for the standard offer established in FERC's regulations to apply to QFs that are 2 MW or smaller.[13]

8. Since the 1980s, this Commission has implemented PURPA by overseeing and approving DEC's and DEP's standard offer tariffs, while instructing the Companies to meet the Companies' mandatory purchase obligation requirements by negotiating PPAs with QFs not eligible for the standard offer at the Companies' then-current avoided costs.[14]

B. <u>Implications of Act 62 on Implementation of PURPA in South Carolina</u>

9. The recent enactment of Act 62 prescribes a new biennial review and approval process for the Commission to administer PURPA implementation in South Carolina.[15] While the Commission has always had the exclusive authority and responsibility to oversee the State's implementation of PURPA in compliance with the regulations established by FERC, Act 62 sets a specific procedural framework through which the Commission must consider these issues. Also, while the Commission's previous review of the Companies' PURPA implementation has been specific to the standard offer, Act 62 expressly requires the Commission to review and approve form PPAs for QFs not eligible for the Standard Offer as well as standard notice of commitment to sell forms available to all small power producer QFs as part of the State's PURPA implementation framework.[16]

10. Act 62 does not modify the foundational requirements of PURPA and defines "avoided cost" consistently with FERC's implementing regulations.[17] In fact, Act 62 mandates

[13] S.C. Code Ann. § 8-41-10(15).

[14] *See Order No. 81-214*, at 8, 9, 20.

[15] *See* S.C. Code Ann. § 58-41-20.

[16] S.C. Code. Ann. § 58-41-20(A),(C),(D).

[17] S.C. Code. Ann. § 58-41-20(A); *see also* 18 C.F.R. 292.304(A).

that South Carolina's PURPA implementation must be "consistent with PURPA and the Federal Energy Regulatory Commission's implementing regulations and orders," expressly requiring that the Commission's determination of the mandatory rates for purchase from QFs shall be "just and reasonable to the ratepayers of the electrical utility, in the public interest . . . and nondiscriminatory to small power producers."[18] In addition, Act 62 further prescribes that the Commission's implementation of PURPA in South Carolina "shall strive to reduce the risk placed on the using and consuming public."[19]

11. In sum, Act 62 directs the Commission to review each South Carolina electric utility's avoided cost rates and PURPA implementation every two years beginning six months from the Act's effective date, specifically including approving the utility's "standard offer, avoided cost methodologies, form contract power purchase agreements, commitment to sell forms, and any other terms or conditions necessary to implement this section."[20]

C. The Commission's Most Recent Actions to Approve DEC's and DEP's Standard Offer Tariffs and Related Documents

12. In Order No. 2016-349, the Commission most recently approved the Companies' avoided cost rates and Standard Offer Tariffs, which became effective July 1, 2016. In particular, the Order approved the Companies' offer of variable, 5-year, and 10-year term avoided cost rates for QFs up to 2 MW in size.

13. On November 30, 2018, DEC and DEP jointly filed an application with the Commission in Docket No. 1995-1192-E to update their standard offer avoided cost rates and Standard Offer Tariffs. On April 4, 2019, the Hearing Officer issued an order placing that

[18] S.C. Code. Ann. § 58-41-20(A).

[19] *Id.*

[20] *Id.*

proceeding in abeyance in recognition of the Legislature's ongoing consideration of what is now Act 62.[21]

14. Because the Companies' Application filed on November 30, 2018, in Docket No. 1995-1192-E is effectively superseded by the Companies' Application filed in the instant proceeding, the Companies are concurrently withdrawing their previously-filed Application.[22] The Standard Offer Tariffs and avoided cost rates, charges and terms and conditions presented in the Companies' Application filed in these dockets, as required by Act 62, apply to all QFs that have committed to sell to DEC or DEP after November 30, 2018.[23]

II. AVOIDED COST RATES FOR QF PURCHASES

A. Avoided Cost Methodology

15. Act 62 directs the Commission to review and approve the methodology that the Companies use to establish avoided energy and capacity cost rates offered to QFs—including QFs eligible for the Standard Offer Tariff as well as QFs not eligible for the Standard Offer Tariff ("Large QFs")—to ensure that it fairly accounts for costs avoided or incurred by the Companies,

[21] *See* Standing Hearing Officer Directive 2019-47H.

[22] The Companies filed a letter today in Docket No. 1995-1192-E withdrawing their previously-filed Application.

[23] Pursuant to the terms of the Schedule PP as approved by Order No. 2016-349 and authorized to become effective July 1, 2016 ("2016 Schedule PP"), the long-term fixed avoided cost rates were available to new QF Sellers only until the Companies filed new avoided cost rates. Specifically, the Availability Section of the 2016 Schedule PP states, "[t]he Fixed Long-Term Credit rates on this schedule are available only to otherwise eligible Sellers that establish a Legally Enforceable Obligation on or before the filing date of proposed rates in the next avoided cost proceeding. . . ." Accordingly, when the Companies filed updated avoided cost rates in Docket No. 1995-1192-E on November 30, 2018, the long-term avoided cost rates, charges and terms and conditions provided for under the 2016 Schedule PP expired. *See Application of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC for Approval of Updated Standard Offer Avoided Cost Rates and Tariffs*, at 2, Exhibit 2, page 1 Docket No. 1995-1192-E (filed Nov. 30, 2018). As the Companies are withdrawing their prior Application filed in Docket No. 1995-1192-E and superseding that prior Application with the Application in this proceeding, the effective date of the Companies' new Schedule PP should be November 30, 2018. Establishing the effective date any later date than November 30, 2018, would result in the absence of long-term fixed avoided cost rates by which new Standard Offer QFs could sell power to the Companies pursuant to PURPA from November 30, 2018 until the later effective date of Schedule PP established in this proceeding.

"including, but not limited to, energy, capacity, and ancillary services provided by or consumed by small power producers[.]"[24]

16. In both South Carolina and North Carolina, the Companies have historically applied the "peaker methodology" to quantify each utility's avoided cost, and this methodology continues to be reasonable and appropriate for calculating DEC's and DEP's forecasted avoided costs as presented in this proceeding.

17. The peaker methodology is generally accepted throughout the electric industry as a fair, reasonable, and accurate means by which to calculate avoided costs. As recently as 2014, the peaker methodology was recognized as an acceptable method for determining avoided cost in the widely relied-upon *PURPA Title II Compliance Manual* published by the National Association of Regulatory Utility Commissioners ("NARUC"), the Edison Electric Institute, and other industry organizations.[25] In addition, both this Commission and the North Carolina Utilities Commission have consistently approved the Companies' use of the methodology in a number of prior avoided cost proceedings.[26]

18. As further described in the testimony of Duke Witness Snider, the peaker methodology determines a utility's marginal capacity cost and marginal energy cost, and is designed to ensure that purchases from new QF generators are not more expensive than the avoided

[24] S.C. Code Ann. §§ 58-41-20(A), 48-41-20(B)(3).

[25] Robert E. Burns & Ken Rose, "PURPA Title II Compliance Manual" at 35 (March 2014) ("PURPA Title II Compliance Manual"), available online at: https://www.naruc.org/our-programs/resources/) (last visited Aug. 11, 2019).

[26] *See Order Setting Avoided Cost Inputs*, at 30, NCUC Docket No. E-100, Sub 140 (Dec. 31, 2014) (noting that the peaker methodology is "generally accepted throughout the electric industry to calculate avoided costs" and stating that the NCUC "has long approved the use of the peaker method for the purpose of establishing avoided costs and has repeatedly held that, according to the theory underlying the peaker method, if the utility's generating system is operating at the optimal point, the cost of a peaker (a CT) plus the marginal running costs of the generating system will equal the avoided cost of a baseload plant and constitute the utility's avoided cost.").

capacity cost of a simple cycle combustion turbine ("CT") or "peaker" unit plus the utility's forecasted avoided system marginal energy cost. In this way, consistent with PURPA, the peaker methodology provides an appropriate and reasonable estimate of the utility's forecasted avoided or incremental costs of alternative energy that the utility would have otherwise incurred but for the purchase from a QF facility.

19. The Companies' application of the peaker methodology appropriately captures all avoidable marginal capacity and energy costs that consumers would otherwise pay "but for" the purchase from the QF and, as such, appropriately leaves the consumer indifferent to purchasing QF generation relative to the utility generating or purchasing alternative energy from another source. The Companies rely upon several key elements in the application of the peaker methodology to accurately align the avoided capacity cost rates that customers ultimately pay with the actual value of the capacity delivered by the QF to the utility. These elements include: (a) calculating the annual avoided capacity value of a CT; (b) determining the year in which each utility has its first avoidable capacity need; (c) determining how annual capacity payments are made to the QF supplier; and (d) applying an appropriate Performance Adjustment Factor in calculating the avoided capacity rate to allow the QF to receive full capacity value if its forced outage rate is equivalent to that of the Companies' overall generation fleets.

20. In order to most accurately reflect the Companies' current estimates of DEC's and DEP's future capacity needs and projections of future costs that QFs can avoid, the Companies are relying upon data and assumptions from the Companies' 2019 IRP Update.[27] Consistent with the

[27] DEC's and DEP's 2019 IRP Updates are currently being finalized and have not yet been filed with the Commission; however, the Companies will provide any information requested from the Parties with regard to their 2019 IRP Updates, as it relates to this proceeding through discovery, pursuant to S.C. Code Regs. 103-833.

Companies' 2019 IRP Update, DEC's first avoidable capacity need arises in 2026, while DEP's first year of avoidable capacity need is 2020.[28]

21. To provide reasonable transparency into the Companies' calculation of DEC's and DEP's avoided costs, the pre-filed testimony of the Companies' witnesses, along with DEC's and DEP's Snider Exhibit 1 provide additional detail regarding the Companies' avoided cost methodology and the underlying data, assumptions and results of the application of the peaker methodology to calculate DEC's and DEP's avoided cost rates, as contemplated by the Act.[29]

B. Applying the Peaker Methodology to Accurately Calculate Avoided Cost Rates for Large QFs

22. The Companies have traditionally applied the same peaker methodology to calculate avoided cost rates for both Standard Offer-eligible QFs and Large QFs. This historical practice is consistent with the provisions of Act 62, which require that avoided cost rates offered by an electrical utility to Large QFs "must be calculated based upon the avoided cost methodology most recently approved by the Commission."[30] In applying the peaker methodology to calculate avoided cost rates applicable to each Large QF, the Companies also update the inputs to the peaker methodology to accurately reflect the Companies' most current forecast of avoided costs at the time the Large QF commits to sell and deliver its energy and capacity to DEC or DEP. Going forward, the Companies will continue to update inputs to the peaker methodology as of the time

[28] For comparison, DEC's 2018 IRP identified that DEC's next avoidable capacity need would arise in 2028 (two years later), while DEP's first year of identifiable capacity need (2020) remained unchanged between DEP's 2018 IRP and 2019 IRP Update. *See* Duke Energy Carolinas, LLC 2018 Integrated Resource Plan, at 70 Docket No. 2018-10-E (filed Aug. 31, 2018); Duke Energy Progress, LLC 2018 Integrated Resource Plan, at 72 Docket No. 2018-8-E (filed Nov. 1, 2018).

[29] *See* S.C. Code. Ann. 58-41-20(J).

[30] S.C. Code § 58-41-20(C).

the QF establishes a "legally enforceable obligation"[31] and will also take the specific supply characteristics or "resource type" of the QF into account in calculating avoided costs, as provided for under PURPA and Act 62.[32] This would include using a solar generation profile for solar QFs to ensure that the Large QF PPA avoided cost rates most accurately reflect the Companies' actual avoided cost, consistent with both PURPA and Act 62. This approach ensures the avoided cost rates paid to Large QFs accurately reflect the value provided to customers, which, in turn, decreases the risk of customer overpayment in excess of the Companies' actual avoided cost, consistent with Act 62's directive for the Commission to strive to reduce the risk placed on the using and consuming public.

C. <u>Avoided Energy and Capacity Rate Design</u>

23. The Companies' avoided energy and avoided capacity rate design also helps to ensure that avoided cost rates accurately compensate QFs for the value of the energy and capacity they provide to the Companies and customers, consistent with PURPA, FERC's implementing regulations, and Act 62. As described further by Duke Witness Snider, the avoided energy rate design includes summer, winter and shoulder seasons and designates nine distinct energy pricing periods to reflect the energy value of QF generation during the different timeframes. Similarly, the Companies' avoided capacity rate design offers three distinct pricing periods, to appropriately reflect the marginal capacity value to customers during each period. Finally, the Companies' rate

[31] *See* 18 C.F.R. 292.304(d)(2)(ii) (explaining that QFs can provide energy and capacity pursuant to a legally enforceable obligation and that the rates for purchase shall be calculated, at the QF's option, "at the time the obligation is incurred.)"

[32] 18 C.F.R. 292.304(c)(3(ii)); (e); *Windham Solar, LLC*, 157 FERC ¶ 61,134 (2016) (explaining that s utilities may take the QF's supply characteristics into account, including, among others, the availability of capacity, the QF's dispatchability, the QF's reliability, and the value of the QF's energy and capacity. *See also* S.C. Code § 58-41-20(B)(3).

design also reflects seasonal allocation weightings for capacity payments based on the impact of summer versus winter loss of load risk.

D. Ancillary Services and Integration Services Charge

24. While, consistent with PURPA, Act 62 defines "avoided cost" to be the "incremental cost of energy or capacity or both" that a utility avoids by making purchases from a QF,[33] it goes on to prescribe that the Companies' avoided cost methodology must "fairly account[] for costs" avoided or incurred related to ancillary services in addition to the cost of energy and capacity.[34] Accordingly, in conjunction with developing the Companies' forecasted avoided cost of energy and capacity under the peaker methodology, DEC and DEP have also commissioned a study of the incremental ancillary services costs of integrating intermittent QF solar into the DEC and DEP systems.

25. In particular, the Companies' Standard Offer Tariffs include an Integration Services Charge to recognize the impact on operating reserves from new variable and non-dispatchable solar capacity. As described in more detail by Duke Witnesses Snider and Wintermantel, the Integration Services Charge was developed based on a study recently conducted by Astrapé Consulting of the current cost to provide the additional operating reserves or generation "ancillary services" needed to integrate increasing levels of solar QF generation into the DEC and DEP systems.

26. The Integration Services Charge is designed to reflect the average integration cost for all existing and committed solar resources and does not assign the full "incremental" integration costs to new solar resources. The $1.10/MWh Integration Services Charge for DEC

[33] S.C. Code Ann. 58-41-20(2).

[34] S.C. Code Ann. § 58-41(20)(B)(3).

and $2.39/MWh Integration Services Charge for DEP is also based only on existing and committed solar capacity in DEP (2,950 MW) and DEC (840 MW) across each utility's respective system. The difference in the DEP and DEC cost is largely driven by the significantly greater amount of existing and committed future solar capacity in DEP compared to DEC.

27. Consistent with the effective date of Schedule PP and the date on which the Companies initially filed the Integration Services Charge with the Commission in Docket No. 1995-1192-E, the Integration Services Charge will apply to new solar generators that commit to sell to DEC or DEP after November 30, 2018. The Companies are not proposing to apply this charge to existing solar QFs or QFs that established LEOs but have not yet entered into PPAs under the pre-existing Schedule PP in effect prior to November 30, 2018. Over time, as existing contracts expire and new contracts are executed, this average Integration Services Charge will apply to all solar providers uniformly.

28. The Companies plan to continue to study the cost to integrate operating and incremental solar generation and will update the Integration Services Charge as part of future avoided cost filings to reflect changes in the Companies' integration costs, including factors such as solar penetration levels, prevailing fuel prices and the makeup of the Companies' future resource portfolios. As described in the Rate Updates section of Schedule PP, any future Commission-approved adjustments to the Integration Services Charge would apply to QFs contracting under the Standard Offer Tariff similar other charges that are updated biennially in Schedule PP.

29. The Companies also recognize that QFs may potentially design and operate their generating facility in a "controlled" manner so as not to impose increased ancillary services costs on the Companies' systems. Accordingly, where a solar generator can demonstrate its capability of operating in a manner that materially reduces or eliminates the need for additional ancillary

service requirements (via, for example, inclusion of energy storage devices operated to smooth solar QF output), the QF may opt to forego the Standard Offer Tariff and to contractually commit through a negotiated PPA with DEC or DEP to operate as a "Controlled Solar Generator" in order to avoid paying the Integration Services Charge. Large QFs that do not commit to operate as Controlled Solar Generators will also be subject to the Integration Services Charge.

III. STANDARD OFFER TARIFF, PPA, AND TERMS AND CONDITIONS

30. Act 62 defines the term "Standard Offer" as "the avoided cost rates, power purchase agreement and terms and conditions approved by the commission and applicable to purchases of energy and capacity by electrical utilities . . . from small power producers up to two megawatts AC in size."[35] Act 62 further directs the Commission to approve each electrical utility's Standard Offer on a biennial basis beginning six months from the law's effective date.[36]

31. As described in more detail by Duke Witness Wheeler, the Companies' Standard Offer Tariff, Standard Offer PPA, and Terms and Conditions represent the contractual mechanisms through which Standard Offer QFs may elect to sell power to the Companies pursuant to PURPA. Schedule PP presents the avoided cost rates available to Standard Offer QFs, which, per the terms of Act 62, is available to QFs up to 2 MW in size. This is consistent with the pre-existing Schedule PP size eligibility criteria for QFs that has significantly encouraged QF development in the Companies' South Carolina service territories since 2016.

32. The Companies' Standard Offer Tariffs reflect the updated rates and terms supported in Section II of this Application, and continue to provide eligible QFs with variable, 5-year, and 10-year fixed term options. The Companies have also included certain provisions of the

[35] S.C. Code Ann. § 58-41-10(15).

[36] S.C. Code Ann. § 58-41-20(A).

Standard Offer Tariff, the Standard Offer PPA, and the Terms and Conditions to clarify the rights and obligations of the Companies and QFs based upon the Companies' recent experience with significant QF development under the pre-existing Standard Offer Tariffs. Some of the most notable provisions, which are described in greater detail by Duke Witness Wheeler, include the following:

(a) The Companies have amended Paragraph 1(e) of their Terms and Conditions to clarify that a QF seller may not transfer or assign its Standard Offer PPA to any person, firm, or corporation that is a party to any other PPA under which it sells or seeks to sell power to the Companies as a QF, if that party is located within one-half mile of the original QF.

(b) The Companies have also amended their Terms and Conditions to define the term "material alteration" and to prohibit sellers from making, without prior consent memorialized in an executed amendment to the PPA, any material alteration to a facility that could impact the agreed-upon contract capacity. Under the revisions, failure to obtain such consent is grounds for default, suspension of purchases, and termination of the PPA.

(c) To provide greater clarity regarding circumstances that will be considered "an emergency condition," the Companies have amended Paragraph 14 of the Terms and Conditions to expressly include any actions the Companies must take to comply with North American Electric Reliability Corporation ("NERC") and SERC Reliability Corporation ("SERC") regulations or standards. Likewise, the amendment to Paragraph 2(b) makes clear that QFs must comply with any Duke Energy system operator instructions and operational protocols for dispatching generation (or battery storage output) on to the system.

(d) The Companies have amended Section 1.4 to the Standard Offer PPA to clarify the "Contract Capacity" of the QF by setting clear agreed-upon and fixed capacity and

annual production amounts. Because any significant deviation from the Contract Capacity would amount to a material alteration under the proposed revised Terms and Conditions, the Companies intend this clarification to resolve any ambiguity regarding the Contract Capacity, prevent unnecessary future disputes, and mitigate the risk to retail customers of overpaying QFs for additional energy at rates exceeding the utility's then-current avoided cost rates.

(e) Finally, the Companies have added a new Section 5 to their Standard Offer PPA which describes the requirements for installation of battery storage at a QF facility and have developed an "Energy Storage Protocol," to allow the Companies' to more reliably plan for and integrate battery storage at QF facilities. This Energy Storage Protocol will be incorporated as Exhibit A to the Standard Offer PPA for any QF proposing to integrate battery storage at its Standard Offer-eligible QF.

33. The Companies have also made certain other ministerial and clarifying modifications to Schedule PP, Standard Offer PPA, and Terms and Conditions.

IV. NOTICE OF COMMITMENT FORM

34. Act 62 provides that small power producer QFs shall have the right to commit to sell their electric output to an electric utility by executing and delivering to the utility a Commission-approved "notice of commitment to sell form," which must provide the small power producer QF a "reasonable period of time" from the submittal of the form to execute a PPA with the utility. [37] Act 62 likewise prohibits a utility from requiring a small power producer QF to execute a PPA prior to receiving "a final interconnection agreement from the electrical utility" as

[37] S.C. Code Ann. § 58-41-20(D).

a condition to "preserving the pricing and terms and conditions established by its submittal of the form to execute a [PPA]."[38]

35. FERC's regulations implementing PURPA's mandatory purchase obligation uniquely provide a QF a right to unilaterally commit itself to deliver energy and capacity over a specified term and, importantly, to bind the utility to purchase the QF's energy and capacity output at the utility's avoided cost rate by establishing what is known as a non-contractual "legally enforceable obligation" ("LEO"). To explain, FERC's regulations specify that a QF shall have the option to either deliver energy on an uncommitted and "as available" basis or to establish a LEO, committing to deliver energy and capacity to the utility over a specified term with rates fixed at the utility's avoided costs calculated at the time the LEO is established.[39] Where a QF commits itself to deliver energy and capacity, it may elect to either enter into a contractually binding PPA or, where the utility refuses to negotiate in good faith and to enter into a PPA, the QF may rely upon a non-contractual LEO prior to executing a mutually-binding PPA to establish the QF's legally enforceable obligation and rights to the utility's avoided cost.[40] The Notice of Commitment Form is thus intended to provide small power producer QFs with a Commission-approved non-contractual option to establish a LEO under PURPA separate from execution of a contractually-binding PPA.

[38] *Id.*

[39] *See* 18 C.F.R. 292.304(d).

[40] *See Grouse Creek Wind Park, LLC*, 142 FERC ¶ 61, 187 at P 40 (2013) (recognizing that a QF may commit to sell its electric output through execution of a contract, or "if the electric utility refuses to sign a contract, the QF may seek state regulatory authority assistance to enforce the PURPA-imposed obligation on the electric utility to purchase from the QF, and a non-contractual, but still legally enforceable, obligation will be created pursuant to the state's implementation of PURPA") (internal citations omitted).

36. The establishment of a LEO must turn on the QF's commitment to sell its output to the utility over a specified term.[41] The Notice of Commitment Form therefore must establish the QF's binding and substantial commitment to sell the electrical output of its facility in order to establish a LEO and should not provide the QF an uncommitted option to walk away from the PPA negotiations without liability. Accordingly, as further described by Duke Witness Johnson, the Companies' Notice of Commitment Form—applicable to both small power producer QFs eligible for the Standard Offer and Large QFs—is designed to ensure the QF makes a binding and substantial commitment to establish a non-contractual LEO prior to executing a PPA by requiring the small power producer QF to:

(a) Obtain certification with FERC as a QF;

(b) Commit to execute a PPA within 90 days and to deliver power within 365 days of submittal of the Notice of Commitment Form;

(c) Demonstrate control of the project site and required permits; and

(d) Request to become an interconnection customer of the utility.

37. These provisions are consistent with FERC's regulations, guidance from other state commissions, and the requirements of Act 62 and are designed to ensure that the small power producer QF makes a binding and substantial commitment when it submits the Form and to avoid gaming of the non-contractual LEO process.

V. LARGE QF PPAS

38. Large QF PPAs are the form PPAs that the Companies will use to contract with QFs not eligible for the Standard Offer (*i.e.*, greater than 2MW) for the purchase of energy and

[41] *JD Wind 1, LLC*, 129 FERC ¶ 61,148 at P 25 (2009) (explaining that "a QF, by committing itself to sell to an electric utility, also commits the electric utility to buy from the QF; these commitments result either in contracts or in non-contractual, but binding, legally enforceable obligations.").

capacity from small power producer QFs under PURPA. Act 62 requires the Commission to review and approve one or more standard form power purchase agreement for use by small power production facilities not eligible for the Standard Offer.[42] The Act provides that such form PPAs should not be determinative of the avoided cost price and length, or "term", of the power purchase agreement and that each such PPA must be "commercially reasonable."[43] The Act also requires utilities' form of Large QF PPAs to contain certain commercial terms and conditions, including, but not limited to, force majeure, indemnification, choice of venue, and confidentiality provisions.[44]

39. As further described by Duke Witness Johnson, the Companies' Large QF PPA is a comprehensive power purchase agreement that is substantially similar to the form of PPA that the Companies have used to contract with numerous large QF facilities over the past several years. The Large QF PPA includes each of the provisions specified by the Act and provides for the exclusive purchase and sale of 100% of the output of energy and capacity from a QF facility on a fixed price, fixed term basis. The longstanding QF marketplace acceptance of the Companies' Large QF PPA—which has facilitated an unparalleled level of solar QF development across the Companies' service territories in North Carolina and South Carolina—confirms that the PPA is commercially reasonable as required by Act 62.

[42] S.C. Code Ann. § 58-41-20(A).

[43] S.C. Code Ann. § 58-41-20(B)(2).

[44] S.C. Code Ann. § 58-41-20(A).

VI. REQUEST FOR APPROVAL

40. WHEREFORE, Duke Energy Carolinas, LLC and Duke Energy Progress, LLC respectfully request the Commission, pursuant to this Application, and in compliance with the requirements of S.C. Code Ann. § 58-41-20(A) approve the following:

(1) The Companies' application of the peaker methodology to calculate DEC's and DEP's avoided cost rates;

(2) DEC's and DEP's Standard Offer Tariff, Standard Offer PPA, and Standard Offer Terms and Conditions;

(3) DEC's and DEP's Large QF PPA;

(4) DEC's and DEP's Notice of Commitment to Sell form; and

(5) To provide any further relief the Commission deems to be just and reasonable and in the public interest.

Respectfully submitted, this the 14th day of August, 2019.

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Counsel for Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

VERIFICATION

GLEN ALLEN SNIDER, being first duly sworn, deposes and says:

That he is Director – Integrated Resource Planning and Analytics – Carolinas; that he has read the foregoing Joint Application of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC for Approval of Standard Offer Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Other Related Terms and Conditions and knows the contents thereof; that the same is true of his own knowledge, that the same is true as to matters stated therein on information and belief; and as to those matters, he believes them to be true.

Glen Allen Snider

Sworn to and subscribed before me
this the 13 day of August 2019.

Notary Public

My Commission Expires: 7-30-2022

THOMAS J. REED-HALL NOTARY PUBLIC GASTON COUNTY, NC